

RESPONSE TO OFFICE ACTION
DATED DECEMBER 15, 2005

Appln No. 10/759,714

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REMARKS

This is in response to the Office Action dated December 15, 2005. Reconsideration is respectfully requested.

Request for Extension of Time

Applicants request that the time period for response be extended two months, from March 15, 2006 to May 15, 2006. Enclosed is Credit Card Form PTO-2038 authorizing the charge of \$450 for the two-month extension fee under 37 CFR 1.17(a)(2).

Acknowledgement of Allowable Subject Matter

Applicants acknowledge, with appreciation, that Claims 16-18, 23, 24, 26 and 38-40 are allowed, and that Claims 5-7, 9 and 10 would be allowable if rewritten in independent form to include the recitations of their respective base claims and any intervening claims upon which they depend. Applicants request clarification regarding Claims 27-36, because it appears that the Examiner meant to allow these claims as evidenced by an apparent typographical error in paragraph 7 of the Action, wherein the Examiner indicates claims "26-26" are allowed. Applicants assume the Claims 26-36 have been allowed, as they are not specifically rejected in view of cited prior art.

Withdrawal of Restriction as to Certain Claims

Applicants acknowledge, with appreciation, that the restriction concerning Claims 30-36 and 38-40 has been withdrawn, and the claims have been examined and allowed.

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Cancellation of Non-Elected Claims

In response to the restriction, made final by the Examiner, applicants have canceled Claims 8, 11-15, 19-22, 25, 37 and 41-48 without prejudice, reserving the right to file these claims in a divisional application.

Summary of the Rejections

Claim 1 is rejected as anticipated by U.S. Patent No. 6,557,645 to Ringer. Claims 2-4 are rejected as obvious over Ringer.

Summary of the Invention

The invention concerns a valve for controlling fluid flow. An example valve, shown in Figure 2, comprises an inlet duct 20 and an outlet duct 22 in fluid communication with the inlet duct. A seat 26 is positioned between the inlet duct and the outlet duct. A pressure chamber 32 is positioned in facing relation with the seat. A closure member 38 is positioned between the pressure chamber 32 and the seat 26. The closure member has a seat engaging surface 44 facing the seat. The closure member is pivotable about an axis 46 to bring the seat engaging surface 44 into and out of sealing engagement with the seat 26 to open and close the valve. A diaphragm 36 is sealingly positioned between the pressure chamber 32 and the closure member 38. The diaphragm is attached to both the pressure chamber and the closure member. The diaphragm is flexible and transfers pressure from the pressure chamber onto the closure member 38. Pressurizing the pressure chamber causes the valve to pivot into sealing engagement with the seat as shown in Figure 2. Depressurizing the pressure chamber allows the closure member to pivot out of engagement with the seat to open the valve as shown in Figure

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3. Water pressure in inlet 20 provides the force to open the valve when the pressure chamber is depressurized.

The Argument

Applicants respectfully traverse the rejections of Claim 1 as anticipated by Ringer as well as Claims 2-4 as obvious over Ringer, contending that the cited reference fails to teach all claim elements as required to support rejections under anticipation and obviousness.

Claim 1 is drawn to a valve, an example of which is shown in Figure 2 of the application. The claim recites that the valve has a pressure chamber in facing relation with a valve seat. In the example valve shown in Figure 2, the pressure chamber 32 is shown in facing relation with the valve seat 26.

The claim also recites that a diaphragm is sealingly positioned between the pressure chamber and the closure member, and is attached to the closure member. This is also shown in Figure 2, with the diaphragm 36 being sealed between cover plate 34 and the valve housing, the diaphragm also being attached to the closure member 38 by a retainer plate 40. These elements, namely, a pressure chamber in facing relation with a seat, and a diaphragm sealingly positioned between the pressure chamber and a closure member and attached to the closure member, are not taught or suggested in Ringer, the Examiner's remarks to the contrary notwithstanding.

Except for the clapper 34 and diaphragm 38, the Examiner has not expressly identified the various components in Ringer that correspond to elements recited in Claim 1, nor has he specified their positional relationships. However, if the Examiner considers the air-side chamber 24 (see Figure 2 of

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Ringer) to be the pressure chamber recited in the claim, and clapper 34 is, as acknowledged, the closure member recited in the claim, and diaphragm 38 is, as stated, the diaphragm recited in the claim, then applicants note that the diaphragm 38 is not sealingly positioned between the air-side chamber 24 and the clapper 34 as recited in the claim. In fact, it is the clapper 34 that is positioned between the air-side chamber 24 and the diaphragm 38. Furthermore, the diaphragm 38 is not "sealingly positioned between the pressure chamber and said closure member" as recited in the claim, but attached only to the clapper. The claim further recites that the diaphragm is flexible and transfers pressure from the pressure chamber to the closure member. In Ringer, by contrast, pressure applied within the air-side chamber 24 works against the clapper 34, and not the diaphragm 38, to close the valve by forcing the clapper against the valve seats 30 and 32. The diaphragm 38, being on the opposite side of the clapper from the air-side chamber 24, cannot exert any force on the clapper due to pressure within the air-side chamber.

Alternately, if the water-side chamber 22 is considered to be the pressure chamber recited in the claim, then it is clear that the diaphragm 38 is not sealingly positioned between the pressure chamber and the closure member, but disengages from seats 30 and 32 when the valve opens. Even if the sealing of the diaphragm 38 with the valve seats 30 and 32 could be construed as the diaphragm being "sealingly positioned" between the pressure chamber and the closing member as recited in the claim, applicants point out that the claim also states that the closure member is brought into sealing engagement with the valve seat when the pressure chamber is pressurized, thereby closing the valve. In

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contrast, when the water-side chamber 22 in Ringer is pressurized it acts to open the valve by pivoting the clapper 34 out of engagement with seats 30 and 32. This is the exact opposite of the valve as recited in Claim 1.

If region 44 is considered to be the pressure chamber recited in Claim 1; then applicants point out that this region is not in facing relation with the valve seat 32 and 30 as recited in the claim. Furthermore, the diaphragm 38 is not "sealingly positioned" between region 44 and clapper 34 as recited in the claim, and even if it were considered to be in such relation when the valve is closed, pressurizing region 44 opens the valve. This is unlike Claim 1 which recites that pressurizing the pressure chamber closes the valve. While the operation of the valve, i.e., whether it closes or opens upon pressurization of the pressure chamber, of itself, is not a structural element, it nevertheless is evidence of the structural differences between the valve according to the invention and the valve disclosed in Ringer, and provides proof that the structural differences between the two valves are significant.

----- Claims 2-4 depend on Claim 1 and should be allowable for the same reasons that Claim 1 is allowable.

Summary

Applicants have shown that the valve disclosed in Ringer is structurally and operationally different from the valve recited in Claim 1, and no matter how Ringer is analyzed, all of the elements recited in Claim 1 are not taught in Ringer. To properly support a rejection on the basis of anticipation, "The identical invention must be shown in as complete detail

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as is contained in the...claim." Richardson v. Susuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Clearly, Ringer does not pass this test and, therefore, cannot properly support the rejection of Claim 1. It follows that Claims 2-4 should also be allowable since they depend upon Claim 1. In view of the arguments presented above, applicants request that the rejections be withdrawn and the application passed to issue.

Respectfully submitted,

SYNNESTVEDT & LECHNER LLP

By: 

John A. Chionchio

Reg. No. 40,954

1101 Market Street, Suite 2600
Philadelphia, PA 19107-2950
Telephone: (215) 923-4466
Facsimile: (215) 923-2189

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